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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/788,814

02/27/2004

Scott R. Schaper

ACUT-1-1002

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08/01/2006

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EXAMINER

SHECHTMAN, SEAN P

ART UNIT

PAPER NUMBER

2125

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/788,814	<b>Applicant(s)</b> SCHAPER ET AL.	
	<b>Examiner</b> Sean P. Shechtman	<b>Art Unit</b> 2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) 1-17 and 27-70 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 18-26 are presented for examination. Claims 1-17 and 27-70 have been withdrawn from consideration.

#### ***Election/Restrictions***

2. Applicant's election of claims 18-26 in the reply filed on June 16<sup>th</sup> 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

#### ***Oath/Declaration***

3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because: Applicant has amended the specification to correct the provisional application number from which benefit is claimed under 35 U.S.C. 119(e). Examiner respectfully submits that the amendment calls into question the propriety of the originally filed declaration in which the incorrect provisional application number remains.

#### ***Information Disclosure Statement***

4. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered (See pages 1-6 of the instant specification).

***Drawings***

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “60” has been used to designate both a genset and a battery. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Figs. 4a or 4b, element 135(see page 12, line 14 of the instant specification). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig. 2, elements 50, 80, 86, 88; Fig. 3, elements 114, 116, 118, 120, 122; Fig. 5, element 204; Fig. 6, element 244; Fig. 9, element 286. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

8. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings are informal. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 18-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 recites the limitation "the operation" in line 7. There is insufficient antecedent basis for this limitation in the claim. For purposes of examination it will be assumed that "the operation" is an operation.

Claim 18 recites the limitation "the generator" in line 8, however, claim 18 recites the limitation of "a generator" in line 3 and "a generator" in line 7, therefore it is not clear which generator is "the generator".

Claim 20 recites the limitation "the gas" in line 1. There is insufficient antecedent basis for this limitation in the claim. For purposes of examination it will be assumed that "the gas" is a gas.

Claim 25 recites the limitation of "the input" in line 1, however, claim 18 recites the limitation of "an input" in line 3 and "an input" in line 5, therefore it is unclear which input is "the input". For purposes of examination it will be assumed that "the input" refers to the input in line 5 of claim 18.

Claim 26 recites the limitation of "the input" in line 1, however, claim 18 recites the limitation of "an input" in line 3 and "an input" in line 5, therefore it is unclear which input is "the input". For purposes of examination it will be assumed that "the input" refers to the input in line 5 of claim 18.

Claims 19 and 21-24 depend from claim 18 and therefore inherent the same deficiencies.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 18, 19, 20, 25, 26 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,712,052 to Kawatsu (hereinafter referred to as Kawatsu).

Referring to claim 18, Kawatsu teaches the following:

a processor (Fig. 1, element 232, Col. 11, lines 54-67);

an input capable of receiving signals from a generator (Fig. 11, element 620 and 238; Col. 17, line 55 – Col. 18, line 7);

an output capable of sending signals to the generator (Col. 11, lines 63-67; Fig. 1, element 238);

an input capable of receiving signals from an operating condition source (Fig. 1, element 238; Col. 11, lines 54-67); and

a memory accessible by the processor (Fig. 1, elements 234 and 236; Col. 11, lines 54-67), the memory containing stored programming instructions operable by the processor to control the operation of a generator and to inhibit operation of the generator if a signal representative of an undesirable condition is received from the operating condition source (Col. 12, lines 4-9; Col. 15, lines 60 – Col. 16, line 10).

Referring to claim 19, Kawatsu teaches the generator controller of claim 18, wherein the operating condition source comprises a gas detector (Fig. 1, element 1).

Referring to claim 20, Kawatsu teaches the generator controller of claim 19, wherein the gas comprises carbon dioxide or carbon monoxide (Col. 12, lines 4-9).

Referring to claim 25, Kawatsu teaches the generator controller of claim 18, wherein the input is configured to receive signals from a plurality of operating condition sources and the stored programming instructions are configured to cause the processor to inhibit operation of the generator if a signal representative of an undesirable condition is received from one of the plurality of operating condition sources (Col. 14, lines 56-65; Col. 15, lines 60 – Col. 16, line 10).

Referring to claim 26, Kawatsu teaches the generator controller of claim 18, wherein the input is configured to receive signals from a plurality of operating condition sources and the stored programming instructions are configured to cause the processor to inhibit operation of the generator as a function of the signals received from one or more of the plurality of operating condition sources (Col. 14, lines 56-65; Col. 15, lines 60 – Col. 16, line 10).

11. Claims 18, 25, 26 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,823,281 to Yamaguchi et al (hereinafter referred to as Yamaguchi).

Referring to claim 18, Yamaguchi teaches the following:

a processor (Fig. 4, element 41; Col. 7, lines 7-17);

an input capable of receiving signals from a generator (Fig. 4, Col. 7, lines 7-17);

an output capable of sending signals to the generator (Fig. 4, Col. 7, lines 7-17);

an input capable of receiving signals from an operating condition source (Col. 9, lines 1-24; Fig. 4, for example element 45); and



a memory accessible by the processor (Col. 7, lines 7-17), the memory containing stored programming instructions operable by the processor to control the operation of a generator and to inhibit operation of the generator if a signal representative of an undesirable condition is received from the operating condition source (Col. 5, lines 16-28; Col. 8, lines 58-67).

Referring to claim 25, Yamaguchi teaches the generator controller of claim 18, wherein the input is configured to receive signals from a plurality of operating condition sources (Fig. 4, elements 45, 46) and the stored programming instructions are configured to cause the processor to inhibit operation of the generator if a signal representative of an undesirable condition is received from one of the plurality of operating condition sources (Col. 5, lines 16-28; Col. 8, lines 58-67).

Referring to claim 26, Yamaguchi teaches the generator controller of claim 18, wherein the input is configured to receive signals from a plurality of operating condition sources (Fig. 4, elements 45, 46) and the stored programming instructions are configured to cause the processor to inhibit operation of the generator as a function of the signals received from one or more of the plurality of operating condition sources (Col. 5, lines 16-28; Col. 8, lines 58-67).

12. Claims 18, 22, 26, 26 are rejected under 35 U.S.C. 102(b) as being anticipated by International Publication WO01/95417 to Hirakata (whole document). In order to expedite prosecution, the examiner will make reference to the corresponding U.S. Pat. No. 6,964,821 to Hirakata (hereinafter referred to as Hirakata).

Referring to claim 18, Hirakata teaches the following:

a processor (Fig. 1, element 52);

an input capable of receiving signals from a generator (Fig. 1, element 58; Col. 11, lines 21-27);

an output capable of sending signals to the generator (Fig. 1, element 58; Col. 11, lines 21-27);

an input capable of receiving signals from an operating condition source (Col. 16, lines 24-26; Col. 15, lines 6-24); and

a memory accessible by the processor, the memory containing stored programming instructions operable by the processor to control the operation of a generator and to inhibit operation of the generator if a signal representative of an undesirable condition is received from the operating condition source (Col. 16, lines 24-26; Col. 15, lines 6-24).

Referring to claim 22, Hirakata teaches the generator controller of claim 18, wherein the operating condition source comprises a vehicle ignition and wherein the undesirable condition comprises the ignition being switched to an on position (Col. 16, lines 24-26; Col. 15, lines 6-24).

Referring to claim 25, Hirakata teaches the generator controller of claim 18, wherein the input is configured to receive signals from a plurality of operating condition sources (Col. 15, lines 6-49; Col. 16, lines 24-26, start switch and output voltage of fuel cells) and the stored programming instructions are configured to cause the processor to inhibit operation of the generator if a signal representative of an undesirable condition is received from one of the plurality of operating condition sources (Col. 16, lines 24-26; Col. 15, lines 6-24).

Referring to claim 26, Hirakata teaches the generator controller of claim 18, wherein the input is configured to receive signals from a plurality of operating condition sources (Col. 15,

lines 6-49; Col. 16, lines 24-26, start switch and output voltage of fuel cells) and the stored programming instructions are configured to cause the processor to inhibit operation of the generator as a function of the signals received from one or more of the plurality of operating condition sources (Col. 16, lines 24-26; Col. 15, lines 6-24).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi as applied to claim 18 above, and further in view of U.S. Pat. No. 6,724,100 to Gabriel (hereinafter referred to as Gabriel).

Referring to claim 21, Yamaguchi teaches all of the limitations set forth above, however fails to teach the operating condition source comprises a parking brake.

Gabriel discloses an input capable of receiving signals from an operating condition source (Col. 4, lines 22-26); and controlling the operation of a generator and to inhibit operation of the generator if a signal representative of an undesirable condition is received from the operating condition source (Col. 7, line 40 – Col. 8, line 2; Col. 8, lines 11-13); wherein the operating condition source comprises a parking brake (Col. 7, line 40 – Col. 8, line 2; Col. 8, lines 11-13).

Yamaguchi and Gabriel are analogous art because they are from the same field of endeavor, operation and control for hybrid electric vehicles. At time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the hybrid electric vehicle Yamaguchi to include the operation inhibiting feature of Gabriel.

One of ordinary skill in the art would have been motivated to modify Yamaguchi because Gabriel teaches a system and method for charging an HEV battery and utilizing the HEV as a generator efficiently and easily (Col. 2, lines 15-20). Furthermore, Gabriel clearly teaches that providing the operation inhibiting feature based on a parking brake condition (Col. 8, lines 10-13) increases safety (Col. 4, lines 20-26).

14. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawatsu as applied to claim 18 above, and further in view of U.S. Pat. No. 6,208,040 to Mardirossian (hereinafter referred to as Mardirossian).

W Referring to claim <sup>24</sup>~~18~~, Kawatsu teaches all of the limitations set forth above, however fails to teach the operating condition source comprises an external alternating current source, and

wherein the undesirable condition comprises the presence of power available at the external alternating current source.

Mardirossian teaches an input capable of receiving signals from an operating condition source (Fig. 5, element 14; Col. 4, lines 1-17); and a control circuit to control the operation of a generator and to inhibit operation of the generator if a signal representative of an undesirable condition is received from the operating condition source (Col. 4, lines 13-17); wherein the operating condition source comprises an external alternating current source (Col. 3, lines 44-45), and wherein the undesirable condition comprises the presence of power available at the external alternating current source (Col. 4, lines 13-17).

Kawatsu and Mardirossian are analogous art because they are from the same field of endeavor, operation and control for fuel cells.

At time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the fuel cell of Kawatsu with the load management technique of Mardirossian.

One of ordinary skill in the art would have been motivated to modify Kawatsu because Mardirossian teaches that due to the utilization of the power from the fuel cell whenever the predetermined utility power level being received has reached a predetermined level, the utility load profile paid for by the customer may remain substantially flat and thereby allowing the customer to avoid payment of costly peak demand charges (Col. 4, lines 46-54).

15. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,204,814 to Noonan et al (hereinafter referred to as Noonan).

Referring to claim 23, Noonan teaches the following:

a processor (Fig. 4, element 12);

an input capable of receiving signals from a generator (Fig. 4, element 16, Col. 7, lines 16-18; Fig. 4, element 13; Col. 7, lines 3-16);

an output capable of sending signals to the generator (Fig. 4, element 13; Col. 7, lines 3-16);

an input capable of receiving signals from an operating condition source (Fig. 4, element 22; Col. 7, lines 31-44); and

a memory accessible by the processor (Col. 7, lines 3-8), the memory containing stored programming instructions operable by the processor to control the operation of a generator and to inhibit operation of the generator if a signal representative of an undesirable condition is received from the operating condition source (Col. 7, lines 31-44, spark enable relay; Col. 3, lines 30-35); wherein the operating condition source comprises an obstruction or people presence detector and wherein the undesirable condition comprises the presence of an obstruction or people adjacent to a vehicle to which the generator is connected (Col. 7, lines 31-44, spark enable relay; Col. 3, lines 30-35).

Noonan teaches all of the limitation set forth above however fails to teach the presence detector detects a building.

Noonan teaches an autonomous lawn mower that is deigned to operate unattended, wherein the lawn mowers navigation system is designed to sense obstacles and to shut-down the vehicle if objects are sensed (Col. 3, lines 30-35).

At time of the invention, it would have been obvious to a person of ordinary skill in the art to place the lawn mower of Noonan on a lawn within the vicinity of a house or building structure, since lawns, that are intended to be mowed, are normally within the vicinity of a house

or building structure; and thereafter detect a building with the obstruction or people presence detector.

One of ordinary skill in the art would have been motivated to place the lawn mower of Noonan on a lawn and thereafter detect a building with the obstruction or people presence detector, to prevent damage to both the lawn mower and building, in the event that the lawn mower bumped into the building. Furthermore, shutting the lawn mower down after detecting building presence would save power and be energy efficient.

### ***Conclusion***

16. The prior art or art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents or publications are cited to further show the state of the art with respect to the U.S. patent corresponding to WO01/95417 to Hirakata.

U.S. Pat. No. 6,964,821 to Hirakata.

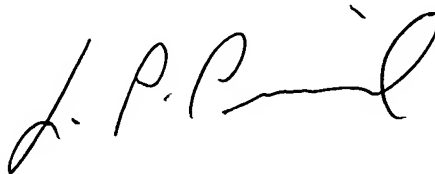
The following patents or publications are cited to further show the state of the art with respect to an operating condition source that comprises a gas detector.

U.S. Pat. No. 5,897,766 to Kawatsu.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (571) 272-3754. The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read "L. P. Picard". The signature is fluid and cursive, with a large loop at the end.

SPS

Sean P. Shechtman

July 7, 2006

**LEO PICARD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100**